

CLAIMS:

1. A pump unit comprising:
a first fixed-capacity type pump (1) having large capacity;
5 a second fixed-capacity type pump (2) having small capacity;
a first discharge line (5) connected to the first fixed-capacity type pump (1);
a second discharge line (8) connected to the second fixed-capacity type pump (2);
10 a variable-speed motor (3) for driving the first and second fixed-capacity type pumps (1, 2);
a switching valve (6) for making the first discharge line (5) and the second discharge line (8) connected or disconnected with each other;
a pressure sensor (17) for detecting a pressure of the second discharge
15 line (8); and
a control device (4) for, upon reception of a signal from the pressure sensor (17) and a signal representing a rotational speed of the variable-speed motor (3), controlling the switching valve (6) and the variable-speed motor (3) so that
20 operation is performed in a first mode and in a second mode, the first mode being a mode in which the first discharge line (5) and the second line (8) are disconnected with each other to make the first fixed-capacity type pump (1) unloaded, in which state a constant-horsepower operation is performed, and the second mode being a mode in which the first discharge line (5) and the second discharge line (8) are connected with each other, in which state a constant-horsepower operation is
25 performed.
2. The pump unit according to Claim 1, wherein
the control device (4) switches the switching valve (6) from connecting
state to disconnecting state when the rotational speed of the variable-speed motor (3)
30 has decreased below a predetermined set rotational speed, and switches the switching valve (6) from disconnecting state to connecting state when the pressure detected by the pressure sensor (17) has decreased below a predetermined set pressure (Pc).

3. The pump unit according to Claim 1, wherein
the control device (4) switches the switching valve (6) from
disconnecting state to connecting state when the rotational speed of the variable-speed
motor (3) has increased over a predetermined set rotational speed, and switches the
5 switching valve (6) from connecting state to disconnecting state when the pressure
detected by the pressure sensor (17) has increased over a predetermined set pressure
(Pc).

4. The pump unit according to Claim 1, wherein
10 the control device (4) includes an input section (19) from which the set
rotational speed and the set pressure are variably inputted so that the first mode and
the second mode are operable in a plurality of modes, respectively.